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SPILL CONTINGENCY PLAN

CHIDLIAK AND ADJOINING QILAQ PROPERTY,
AND CUMBERLAND PROSPECTING PERMITS
BAFFIN ISLAND, NU,
(including both Crown Land and IOL Parcels)
PEREGRINE DIAMONDS LTD.

Revision 7: 23 March 2011



Material Safety Data Sheet

NR05363 PROPYLENE GLYCOL USP/EP

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: NR05363

Product Name: PROPYLENE GLYCOL USP/EP

Synonyms: None

Chemical Family: Aliphatic polyhydric alcohol / aliphatic dihydric alcohol / aliphatic diol / glycol

Application: Humectant and solvent for: Foodstuffs. Flavours. Fragrances. Cosmetics. Pharmaceticals. Personal care

applications. Not for use in cat food.

Distributed By: Univar Canada Ltd. 9800 Van Horne Way Richmond, BC V6X 1W5

Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.

Preparation date of MSDS: 03 March 2009 Telephone number of preparer: 1-866-686-4827

24-Hour Emergency Telephone Number (CANUTEC): (613) 996-6666

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Propylene glycol 57-55-6	>99.8	Oral LD50 (Rat) = 20000 mg/kg Dermal LD50 (Rabbit) = 20800 mg/kg

Note: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapour or mist may cause eye irritation.

Skin Contact: Prolonged contact is essentially non irritating to skin. Repeated contact may cause flaking and softening of skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: At room temperature, exposure to vapor is minimal due to low volatility. Mist may irritate nose and throat. **Ingestion:** Low toxicity. Small amounts swallowed incidental to normal handling operations are not likely to cause injury.

4. FIRST AID MEASURES

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact: Wash skin with plenty of water.

Inhalation: Remove to fresh air if effects occur. Consult a physician.

Ingestion: No first aid should be needed.

Notes to Physician: Treatment based on sound judgment of physician and individual reactions of patient.

5. FIRE FIGHTING MEASURES

Flash Point: 103 °C / 217.4 °F

Flash Point Method: Pensky-Martens Closed Cup Autoignition Temperature: 400 °C / 752 °F

Flammable Limits in Air (%): Lower: 2.6% Upper: 12.5%

Extinguishing Media: Water fog or fine spray, carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Do not use direct water stream, which will spread fire.

Special Exposure Hazards: Isolate and restrict area access. Use water spray to cool fire-exposed containers and structures. Fight fire from a safe distance and from a protected location. Consider use of unmanned hose holder or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or discolouration of tank. Always stay away from the end of tanks. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Hazardous Decomposition/Combustion Materials (under fire conditions): Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 0, FLAMMABILITY 1, INSTABILITY 0 HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 0, FLAMMABILITY 1, REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

Procedure for Clean Up: Isolate hazard area and restrict access. Contain spilled material if possible. Large spills or leaks should be confined by diking. Pump spilled material into suitable containers for removal. Flush area with water, contain and remove cleanup liquid. Small amounts of spilled liquid may be absorbed using appropriate absorbent material. Spilled material may cause floors and contact surfaces to become slippery.

7. HANDLING AND STORAGE

Handling: Product shipped/handled hot can cause thermal burns. Product handled hot may require additional ventilation or local exhaust. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion.

Storage: Store in a cool dry place. Keep away from direct sunlight or strong incandescent light. Keep containers tightly closed. Protect against moisture. Store in the following material(s): Stainless steel. Aluminum. Plasite 3066 lined container. 316 stainless steel. Opaque HDPE plastic container. Product has a shelf life of 24 months. The maximum storage temperature is 40°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airbourne concentration. In misty atmospheres, use an approved organic vapor respirator in combination with a dust/mist filter. Organic vapour cartridge with a particulate pre-filter.

Gloves:

Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Skin Protection: Normal work coveralls.

Eyes: Safety glasses or goggles.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station

location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Propylene glycol	Not available.	Not available.	Not Available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid. Colour: Colourless. Odour: Odourless pH Not Available.

Specific Gravity: 1.04 @ 20°C Boiling Point: 187.4°C /369.32°F

Freezing/Melting Point: <-57 °C / <-70 °F (Pour point)

Vapour Pressure: 0.3 mbar @ 25°C

Vapour Density: 2.62

% Volatile by Volume: Not Available.

Evaporation Rate: 0.01 Solubility: 100% VOCs: Not Available.

Viscosity: 48.6 mPs @ 25°C Molecular Weight: Not Available.

Other: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Hygroscopic (absorbs moisture from the air). Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.

Materials to Avoid: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers. Organic acids.

Additional Information:

No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Low toxicity. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. **Skin Contact:** Prolonged contact is essentially non irritating to skin. Repeated contact may cause flaking and softening of skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Inhalation: At room temperature, exposure to vapor is minimal due to low volatility. Mist may irritate nose and throat.

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11. TOXICOLOGICAL INFORMATION

Eye Contact: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapour or mist may cause eye irritation.

Additional Information: In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Acute Test of Product:

Acute Oral LD50: Not Available.
Acute Dermal LD50: Not Available.
Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Propylene glycol	Not listed.	Not listed.

Carcinogenicity Comment: Did not cause cancer in laboratory animals.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Did not cause birth defects or any other fetal effects in laboratory animals. No interference with reproduction has been shown in animal studies. In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Propylene glycol	LC50 (Pimephales promelas) 51400 mg/L LC50 (Oncorhynchus mykiss) 51600 mg/L		EC50 (Selenastrum capricornutum) 19000 mg/L

Other Information:

Ecotoxicity: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 or EC50 >100 mg/L in the most sensitive species tested).

Material is readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Not Regulated.
DOT Hazardous Class Not Applicable.
DOT UN Number: Not Applicable.
DOT Packing Group: Not Applicable.

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark. **Marine Pollutant:** No.

TDG (Canada):

TDG Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

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14. TRANSPORT INFORMATION

UN Number: Not Applicable.
Packing Group: Not Applicable.
Note: No additional remark.
Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Note: Not available.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section	SARA (311, 312) Hazard	CERCLA/SARA - Section	
	302:	Class:	313:	
Propylene glycol	Not Listed.	Not Listed.	Not Listed.	

California Proposition 65: Not Listed.
MA Right to Know List: Not Listed.
New Jersey Right-to-Know List: Listed.
Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class: NON-CONTROLLED

16. OTHER INFORMATION

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

NOTICE TO READER:

Univar, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univer Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

END OF MSDS

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

IN CASE OF EMERGENCY: Calgary, Alberta: 1-800-844-9457

Product: PROPYLENE GLYCOL ANTIFREEZE

Effective Date: March 1, 2009

BOSS Lubricants

112, 6303 30 Street SE, Calgary, Alberta T2C 1R4

2. COMPOSITION / INFORMATION ON INGREDIENTS

Propylene Glycol Antifreeze

CAS# 000057-55-6 99%

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Mists may cause eye irritation.

SKIN: Prolonged contact is essentially nonirritating to skin. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated exposures may cause flaking and softening of skin. May be absorbed in potentially harmful amounts when applied in large quantities to severe burns (second or third degree) over large areas of the body as part of a cream or other tropical application. Absorption under such circumstances can elevate serum osmolality and may result in osmotic shock.

INGESTION: Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

INHALATION: At room temperature, vapors are minimal due to physical properties. Mists may cause irritation of upper respiratory tract.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Repeated excessive ingestion may cause central nervous system effects.

CANCER INFORMATION: Did not cause cancer in long-term animal studies

TERATOLOGY (BIRTH DEFECTS): Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus.

REPRODUCTIVE EFFECTS: In animal studies, has been shown not to interfere with reproduction.

4. FIRST AID

EYE: Flush eyes with plenty of water.

SKIN: Wash off in flowing water or shower.

INGESTION: May be harmful or fatal if swallowed in large amounts. Very little adverse effects anticipated by this route of exposure <u>incidental</u> to proper industrial handling.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgement of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: 218 °F, 103 °C

METHOD USED: PMCC

AUTOIGNITION TEMPERATURE: Not determined

FLAMMABILITY LIMITS

LFL: 2.6% UFL: 12.5%

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion product may include and are not limited to: aldehydes, carbon monoxide.

OTHER FLAMMABILITY INFORMATION: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: Water fog or fine spray. Carbon dioxide. Dry chemical. Foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein

foams may function, but much less effectively. Do not use direct water stream. Will spread fire.

MEDIA TO BE AVOIDED: Do not use direct water stream.

- **FIRE FIGHTING INSTRUCTIONS:** Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire.
- **PROTECTIVE EQUIPMENT FORE FIRE FIGHTERS:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
- 6. **ACCIDENTAL RELEASE MEASURES** (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Isolate area.

PROTECT THE ENVIRONMENT: Contain liquid to prevent contamination of soil, surface water or ground water.

CLEANUP: For small spills, clean up with absorbent material. Collect material in suitable and properly labeled open containers. For large spills, dike and pump into suitable and properly labeled containers.

7. HANDLING AND STORAGE

HANDLING: Product handled hot may require additional ventilation or local exhaust.

STORAGE: Keep containers tightly closed when not in use. store in stainless steel, aluminum, Plastic 3066 lined containers, or 316 stainless steel.

8. EXPOSORE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use safety glasses. Safety glasses should be sufficient for most operations; however, for misty operations wear chemical goggles.

SKIN PROTECTION: Use gloves impervious to this material.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

EXPOSURE GUIDELINE(S): Propylene glycol: AIHA WEEL is 50 ppm total, 10 mg/m3 aerosol only.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless liquid

ODOR: Odorless

VAPOR PRESSURE: 0.08 mmHg @ 20C, 68F

VAPOR DENSITY: 2.62

BOILING POINT: 370 °F, 188 °C SOLUBILITY IN WATER: Complete

SPECIFIC GRAVITY: 1.038 @ 20 °C, 68 °F

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: Product can decompose at elevated temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: When available oxygen is limited, as in a fire or when heated to very high temperatures by hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

HAZARDOUS POLYMERIZATION: Will not occur.

11. **TOXICOLOGICAL INFORMATION** (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

SKIN: The LD50 for skin absorption in rabbits is >10,000 mg/kg.

INGESTION: The oral LD50 for rats is 20,000-34,000 mg/kg.

May be harmful or fatal if swallowed in large amounts

MUTAGENICITY: In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

12. **ECOLOGICAL INFORMATION** (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Based largely or completely on information for similar material(s), i.e. propylene glycol. Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is -0.92. Henry's Law Constant (H) is 1.2E-8 atm.m3/mole.

DEGRADATION & PERSISTENCE: Based largely or completely on information for similar material(s), i.e. propylene glycol. Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). Biodegradation is expected to be achievable in a secondary waste-water treatment plant. 5-Day biochemical oxygen demand (BOD5) is 1.16 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.45 p/p. Theoretical oxygen demand (ThOD) is calculated to be 1.68 p/p. Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is greater than 1gm/L. Degradation is expected in the atmospheric environment within minutes to hours.

ECOTOXICITY: Based largely or completely on information for similar material(s), i.e. propylene glycol. Material is practically non-toxic to aquatic organisms on an acute basis (LC 50 greater than 100mg/L in most sensitive species).

Acute LC50 for fathead minnow (Pimephales promelas) is 46500-54900 mg/L.

Acute LC50 for guppy (Poecilia reticulata) is greater than 10000mg/L.

Acute LC50 for water flea Daphnia magna is 4850-34400 mg/L. Acute LC50 for rainbow trout (Oncorhynchus mykiss) is 44mL/L (about 44000 mg/L.

13. **DISPOSAL CONSIDERATIONS** (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with

applicable laws are the responsibility solely of the waste generator. BOSS LUBRICANTS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator, waste water treatment system.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION: This product is not regulated by **D.O.T.** when shipped domestically by land.

CANADIAN TDG INFORMATION: For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or **your BOSS representative.**

15. **REGULATORY INFORMATION** (Not meant to be all-inclusive—selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Not to	have	met any	/ hazaro	d cate	gory	

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

OSHA HAZARD COMMUNICATION STANDARD:

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This product is not a "Controlled Product" under WHMIS.

16. OTHER INFORMATION

BOSS LUBRICANTS makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied is made by BOSS LUBRICANTS as to the effects of such use, the results to be obtained or the safety and toxicity of this product nor does BOSS LUBRICANTS assume liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein ad does not relate to use in combination with any other material or in any process.

17. SECTION PREPARATION

March 1, 2009

PREPARED BY: Technical Services

BOSS Lubricants Ltd. 112, 6303 30 Street S.E. Calgary, Alberta T2C 1R4 (800) 844-9457



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LIST OF REVISIONS: ADDENDUM PAGE

Original Plan: 03 January 2008
Revision 1: 28 July 2008
Revision 2: 01 March 2009
Revision 3: 29 May 2009
Revision 4: 25 March 2010
Revision 5: 07 May 2010

Revision 5b: 27 September 2010 Revision 6: 17 January 2011 Revision 7: 23 March 2011

(NOTE 1: Revisions are identified in the text with a superscript number at the end of the revised or added sentence, phrase or paragraph. Superscript numbers appear as 2 , 3 , 4 , 5 , 6 or 7)

(NOTE 2: Revisions denote changes such as programme or date changes, change of phone number, change or addition of personnel, addition of equipment or products, new or adjusted maps and new appendices.)



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Map 4c ⁷	All Proposed Drillhole Locations on Hall Peninsula Properties ⁷
Map 5 ⁷	Provisional Sample Plan on Chidliak and Qilaq IOLs - 2011 ⁷
Map 6	Location of Third Camp, Chidliak Project, approx. 50km N of Existing Camps ⁶

APPENDICES

Appendix - MATERIAL SAFETY DATA SHEETS (MSDS)
Index to contents of sections on <u>Fuels, Fuel Additives, Oil</u>; <u>Drilling Muds, Greases, Lubricants</u>; and <u>Miscellaneous Chemicals</u>⁷
(CD updated in March 2011 to incorporate two new MSDS sheets) ⁷

Appendix – SPILL RESPONSE: PRACTICE DRILL Record, with photographs, of a spill-response exercise held 19 July 2010⁵

(NOTE: Record of 2010 spill-response-drill exercise accompanies this revised Plan as a separate document). ⁵

Appendix – "Notice of Modification" Letter to Nunavut Water Board regarding Single Event of Blasting which Occurred in July 2010⁶



The Spill Contingency Plan for "Chidliak and Adjoining Qilag Property, and Cumberland Prospecting Permits⁵" of Peregrine Diamonds Ltd. (Peregrine), found on the following pages, shall be in effect from the current date (March 2011⁷) until the end of September 2011⁵, and is subject to revision as required. The Chidliak Project programme for the current year will occur between mid-February (construction of the new North Camp) 6 and September 20116 and is expected to be comprised of airborne geophysical surveying, ground geophysics and a lakebased drill programme, extraction of a mini-bulk sample or samples, core drilling of land-based targets utilising two heliportable drills, one small waterless North Span reverse-circulation rig, a surficial sediment sampling programme, prospecting and environmental surveys. Sunrise and North Camp (now called Aurora Camp)⁷ will be in operation in winter-spring 2011⁶, with Sunrise also in operation through summer 2011⁶. Discovery Camp will be in operation only in summer.⁶ Each of the three camps can accommodate a camp population of 24 people.⁷ Support services come from Igaluit, approximately 60km W of the southwest corner of Chidliak². The Chidliak property is comprised of 852⁷ claims located across 18 mapsheets in NTS 26A, 26B, 25O and 25P. Qilag is comprised of 33⁷ Prospecting Permits and Cumberland is comprised of 40⁷ Prospecting Permits. This Spill Plan will be in effect for both properties², for any sampling or drilling on IOLs, and for helicopter-borne sampling⁷ conducted on the new Cumberland Prospecting Permits.⁵ It also must be noted that Peregrine properties² are remote; no communities are nearby, and thus no persons other than the camp population of Peregrine geologists and geophysicists, geophysical personnel, helicopter pilots, drillers, cook/first-aider (Level II certification or higher), medic, camp managers² and attendant(s), environmental/bear monitors², and potentially local assistants for the ground geophysics, environmental² and sediment-sampling programmes would be affected in the event of an incident. In the case of the Cumberland Peninsula sampling project, Pangnirtung is only 38km W of the closest point on the Cumberland Project, so special attention will continue to be given to co-ordinating activities with local land-use.

All employees, whether permanent or casual, and programme contractors, are required to be trained in Peregrine procedures, field and wildlife safety, spill and fire procedures and environmental awareness prior to engaging in work at a Peregrine site. Peregrine is keenly aware that planning for an emergency situation is not an option but an obligatory activity, equal in importance to the exploration programme itself. This Contingency Plan will be posted in camp and at each worksite or office of each project² and will be distributed to supervisory personnel for dissemination to staff and contractors.

BASIC STEPS - SPILL PROCEDURE

A <u>spill</u> is classified as the discharge of petroleum products or other dangerous substances into the environment. Potential hazards created by the spill for humans, vegetation, water resources, fish and wildlife vary in severity, depending on several factors, including nature of the material, quantity spilled, location and season. Refer to the detailed *Spill Contingency Plan – Chidliak Project* for specific response information. The general emergency response to be followed in the event of a spill at the Chidliak Project, the Qilaq Project⁴, adjoining IOLs² or the Cumberland Project⁵, is:



Protect people - prevent personnel from approaching the site and keep them at a distance sufficiently removed that they will not be injured by, or cause, a fire or explosion

Identify the product and its source - check container design, warning labels, markings, Material Safety Data Sheets, etc., to enable prompt and appropriate response.

Stop the flow at the source - reduce or terminate the flow of product without endangering anyone

Assess the seriousness of the spill - assess potential dangers of the spill to human health and safety, the aquatic environment, wildlife, ground water, vegetation and other land resources.

Report the spill – complete a NU Spill Report Form and contact the NU 24-hour Spill Report Line. Provide information on the form to the Environment Canada officer by phone/FAX or e-mail³, including location of spill, (company) name of polluter, type and amount of material spilled, date and time of the spill, any perceived threat to human health or the environment, and remedial actions taken and planned.

Clean up the spill - follow procedures appropriate for the location, environment, material and time of year.

Evaluate and learn – after the emergency has passed, evaluate the incident and the cleanup with the goal of continuous improvement in prevention and response; train or re-train personnel and ensure a practice incident-and-response drill is held at least once per field season (cf. Appendix - "Spill Response: Practice Drill").

24-Hour Spill Report Line: (867) 920-8130 or fax (867) 873-6924

Environment Canada Enforcement: 24-Hour Emergency Line: (867) 920-8130 Indian and Northern Affairs (INAC) Water Resources Officer (Iqaluit): (867) 975-4298 INAC Lands Administrator (Iqaluit): (867) 975-4275 INAC Manager of Field Operations (Iqaluit): (867) 975-4295

PERMITS AND AUTHORISATIONS

The Chidliak and Qilaq⁴ properties total over 1.2 million⁷ ha; the Cumberland property in 2011 totals 526 728.63 ha⁷. Most of Chidliak-Qilaq is on Crown land, but 8⁷ surface parcels of Inuit-Owned Lands (IOLs) intersect the properties at the north, northeast and south². This Spill Plan also will be in effect on any IOL parcels where activity is conducted in 2010² or 2011⁵, as well as on the Cumberland Prospecting Permits⁵.

Peregrine holds a Class A Land-Use Permit #N2008C0005 from Indian and Northern Affairs Canada (INAC) and Type B Water Licence #2BE-CHI0813 from the Nunavut Water Board (NWB). Peregrine also holds Qikiqtani Inuit Association (QIA) Land Licence #Q10L1C008 ⁵ to conduct mineral sampling on the adjoining surface IOLs² and #Q10L1C014 to conduct mineral sampling on IOLs within the Cumberland property. (#Q10L1C008 and #Q10L1C014 will be replaced by new QIA licences in 2011).⁷



SPILL-RESPONSE TEAM LEADERS

The following are in charge of the Chidliak sites³, in respect of management or control of contaminants.

Peter Holmes, VP - Exploration: (604) 408-8880; 24-hour mobile: (250) 830-4443.

Shirley Standafer-Pfister, Manager, Regulatory and Environmental Affairs²: (604) 408-8880³, (604) 408-8881 (FAX); 24-hour mobile: (250) 686-1769.³

Operations Manager: Sunrise camp phone **(778) 372-2761, -2763, (604) 759-0325.** ⁷ North camp (Aurora) phone numbers: **(778) 372-2668, -2669, -2672.** ⁷ (New numbers for Discovery camp to be provided when the camp reopens in summer 2011. ⁷)

Project Manager, Al O'Connor⁶: Camp phones (above) or 24-hour mobile: (604) 379-0998.⁶ Project Manager-Cumberland: Phone number to be provided. ⁶

Name and address of proponent in charge of the projects² noted in this Plan:

Peregrine Diamonds Ltd. Suite 201-1250 Homer Street Vancouver, BC V6B 1C6

FACILITY DESCRIPTION

<u>Facility</u> – Seasonal tent camps which can accommodate up to 24 persons each.⁷ All have or will have above-ground fuel storage in 205L drums (diesel, Jet-B, petrol/gasoline) and propane in 45kg cylinders.

<u>Location</u> – Discovery camp and natural-gravel airstrip: 64° 14' 25" N. lat. – 66° 20' 45" W. long.³ Sunrise camp² on unnamed lake to the east: 64° 14' 16" N lat. – 66° 07' 38" W long.³ New North Camp⁶ at: 64° 36' 33" N. lat. – 66° 34' 36" W. long.⁵ Fuel: stored on flat, gravel/cobble area at each camp², a safe distance from the tents and well away (>30m) from waterbodies. Large caches³ and tent drums⁶ are bermed in secondary containment.³

Table 1: Projected Fuel and Oil Use for 2011⁶ Exploration Activities

Fuels	No. of Containers	Capacity of Containers
Diesel for camp stoves, equipment	250 ⁵ drums	205L (incl. 3 rd camp) ⁵
Aviation turbine fuel (Jet-B)	600 ⁴ drums	205L
Aviation turbine fuel (Jet-B) – Cumberland ⁵	500 drums	205L (if req'd)
Unleaded petrol (gasoline)	15 ⁵ drums	205L
Propane	60 ⁵ cylinders	45kg
Oxygen (medical)	3 ⁵ cylinders	10kg
Oils/lubricants/cleaners	150 ⁵	1L to 5L (typical sizes)

Empty drums (crushed), cylinders regularly backhauled.



Table 2: Contents of Spill Kits – Spring/Summer 2011⁵

<u>Fuel Cache/Heli Area and Airstrip³–Spill-Kit Drums – 1 per Cache² and 1 per Airstrip³</u> 1 complete drum kit will be supplied at each fuel cache,² at the Chidliak gravel airstrip and also at the

1 complete drum kit will be supplied at each fuel cache,² at the Chidliak gravel airstrip and also at the Chidliak on-ice temporary airstrips⁵ with (as a minimum) absorbents, socks, disposal bags. (Kits at all three camps⁵ will contain the following: safety goggles, rubber gloves, absorbents, socks, sealant putty and a plastic disposal bag.) [Note: On-ice cleanup measures are discussed on Pages 37-38].

Auxiliary kits (e.g., approximately 130L-136L size) will be deployed around cache areas, as required. 2

Camps - Spill-Kit Drums - 1 (Full Size⁶) per Camp (as a Minimum) ⁶

<u>Location:</u> Stationed at gen-shed in camp, but can be deployed where required: 1 complete drum kit will be supplied with (as a minimum) absorbents, socks, disposal bags. (Kits at all three camps⁵ will contain the following: safety goggles, rubber gloves, absorbents, socks, sealant putty and a plastic disposal bag.)

Drillshack – Spill-Kit Drums – 1 per Drillsite⁶

Trenching Site – Spill-Kit Drums – 1² (if trenching were to occur) ⁴
Fuel Cache (on Land) proximal to Lake-Based Drillsite – Spill-Kit Drums – 1⁴

<u>Location: Moves with drillshack ² or cache</u>: 1 complete drum kit will be supplied with (as a minimum) absorbents, socks, disposal bags, whether the hole is land-based or ice-based. ³

At all locations, additional bundles of absorbents will be present in addition to the spill kits.

Table 3: General Response Inventory – Spring/Summer 2011⁵ – Chidliak Property

- Fire extinguishers (valid/recharged) in each structure: Tents, sheds.
- Water pump and spare at camp; hoses and fittings
- Hammers, assorted weights, at core shack or storage shed ²
- Cat 247B2 Multi-Terrain Loader (Bobcat-type heavy equipment available to move drums or other loads)³ and Kubota Sub-Tractor (for snow-clearing on lakes)⁶
- Assorted 10L-20L plastic pails; galvanised metal pails (approx. 10L each)
- Ice auger (gas-powered) c/w extensions (for spring conditions)
- 121L plastic garbage bags (boxes of 20 each) kitchen and latrine
- Plastic tarps assorted sizes
- Extra bundles of absorbents
- Fuel-transfer pump and spare at each ² camp
- Refuge drums (empty drums for containing spilt substances).

TRAINING AND PRACTICE DRILLS

All members of the programme response team – as well as members of the general team, such as the Regulatory/Environment Manager² and the Expeditor – will be familiar with the spill-response resources at the worksites (including their location and how to access them), this Spill Plan, and appropriate spill-response methods. Involvement of other personnel may be required, from time to time. This familiarity will be acquired through:



- 1. Initial or refresher training (practice drills), as appropriate, provided once per field season (cf. Appendix "Spill Response: Practice Drill").
- 2. Regular inventory updates, provided in list form to all team members. Information to be reported includes listing of resources, number of items and locations, condition, date of last inspection and any comments (e.g., expiry dates, under whose authority they may be accessed and special handling instructions, if any).

FUEL SPILLS: RISK ASSESSMENT AND PREVENTIVE MEASURES

The possibility of a fuel spill on Peregrine projects will vary, depending on a number of factors, including human error, mechanical failure, route conditions, weather.

Risk Assessment & Preventative Measures

POTENTIAL PROBLEM	Імраст	PROBABILITY	PREVENTATIVE MEASURES
Diesel or Oil Major leak from drums	High	Low	Training/refresher training for site personnel who handle fuels. Daily inspections and monitoring will take place during the programme by designated site personnel. Placement of drums in a suitable area (e.g., depression, vegetation-free and boulder-free), with natural drainage pattern away from water, and the required setback from shoreline. Berming with peat bales or snow. Secure drums in use on proper stands or racks.
A spill from a valve left open or a break in a transfer hose.	High	Moderate	Daily inspections to ensure all valves are either closed (when not needed), or that a catch pail is installed beneath valves, e.g., at tents, drillshacks, or that an enviro-tainer is in use. Fuel transfer hoses will have a double locking mechanism and undergo daily inspection as part of the routine work cycle, to check for soundness and wear. Markers around all fuel transfer lines.
Pump Failure	Low	Low	Pumps are to be inspected weekly and - serviced monthly.



Risk Assessment & Preventative Measures (cont.)

POTENTIAL PROBLEM	IMPACT	PROBABILITY	PREVENTATIVE MEASURES
Diesel or Oil Major leak from drums	High	Low	Training/refresher training for site personnel who handle fuels. Daily inspections and monitoring will take place during the programme by designated site personnel. Placement of drums in a suitable area (e.g., depression, vegetation-free and boulder-free), with natural drainage pattern away from water, and the required setback from shoreline. Berming with peat bales or snow. Secure drums in use on proper stands or racks.
A spill from a valve left open or a break in a transfer hose.	High	Moderate	Daily inspections to ensure all valves are either closed (when not needed), or that a catch pail is installed beneath valves, e.g., at tents, drillshacks, or that an enviro-tainer is in use. Fuel transfer hoses will have a double locking mechanism and undergo daily inspection as part of the routine work cycle, to check for soundness and wear. Markers around all fuel transfer lines.
Pump Failure	Low	Low	Pumps are to be inspected weekly and - serviced monthly.
Power Outages	Low	Low	In case of gen-set failure/power loss, any refuelling or maintenance under way in the gen-shed will cease immediately and the spare gen-set will be brought on line before refuelling or maintenance resumes.
Broken Or Blocked Drill Sludge Lines	Low	Moderate	Lines are inspected daily as part of the routine work cycle.



Risk Assessment & Preventative Measures (cont.)

Роте	NTIAL PROBLEM	es (oxygen, vlene, propane, n, carbon			BABILITY	PREVENTATIVE MEASURES				
	Chemical Spills			Low		Training in the handling of chemicals will take place to ensure safe handling. Chemicals will be stored in their original labelled drums, bottles, canisters or packages. Chemicals will be stored in such a way as to protect from the weather or spillage, and be in non-reactive trays, underlain with liner material or absorbents to prevent chemicals coming into contact with soil or tent floors. Regular inspections will take place of stored chemicals. Inventory controls in place.				
	Gases (oxygen acetylene, prop argon, carbon dioxide)					Training/refresher training for site personnel who handle gases. Stored in designated areas until required, secured upright. Daily checks of cylinders in use, including gas-detector monitoring, as necessary.				



FIGURE 1: Updated NWT-Nunavut Spill Report Form

Northw	est Nunavut	Canadä				PILL R				NT-	NU 24	-HOUR SPILL REPORT LINE TEL: (867) 920-8130 FAX: (867) 873-6924 EMAIL: spills@gov.nt.ca
_	PEROPE DATE: MONI	TI DAY VEAD			2500							EPORT LINE USE ONLY
Α	REPORT DATE: MON	TH - DAY - YEAR			REPU	PRTTIME	□ ORI	GINAL SE	PILL REPO	RT, OR	REF	PORT NUMBER
В	OCCURRENCE DATE	:: MONTH - DAY - YEA	IR.		OCCL	JRRENCE TIME		UPDATE# OTHE ORIGINAL SPILL REPORT				•
С	LAND USE PERMIT N	UMBER (IF APPLICABI	Æ)			WATER LICENCE N	UMBER	(IF APPL	ICABLE)			
D	GEOGRAPHIC PLACE	NAME OR DISTANCE	AND DIRECTION FRO	OM THE NA	AMED	LOCATION		REGION		AVUT 🔲 AI	DJACE	NT JURISDICTION OR
E	LATITUDE DEGREES M	INUTES SECO	ONDS			LONGITUDE DEGREES	MINUTE	ES	SECO	NDS		
F	RESPONSIBLE PART	Y OR VESSEL NAME		RESPON	ISIBLE	PARTY ADDRESS C	ROFFIC	CE LOCA	TION			
G	ANY CONTRACTOR IN	NVOLVED		CONTRA	CTOF	ADDRESS OR OFFIC	CE LOCA	ATION				
Н	PRODUCT SPILLED			QUANTIT	YINL	ITRES, KILOGRAMS	OR CUB	SIC METR	ES	U.N. NUM	BER	
•	SECOND PRODUCTS	SPILLED (IF APPLICABL	-E)	QUANTIT	YINL	ITRES, KILOGRAMS	OR CUB	IC METR	ES	U.N. NUMBER		
ı	SPILL SOURCE			SPILL CA	SPILL CAUSE AREA OF (REA OF O	CONTAMINATION IN SQUARE METRES			
J	FACTORS AFFECTING SPILL OR RECOVERY DE			DESCRIBE ANY ASSISTANCE REQUIRED HAZARDS TO			O PERSOI	PERSONS, PROPERTY OR ENVIRONMENT				
	ADDITIONAL INFORMA	ATION, COMMENTS, A	CTIONS PROPOSED	OR TAKEN	TOC	ONTAIN, RECOVER	OR DISP	POSE OF	SPILLED F	RODUCT	AND O	ONTAMINATED MATERIALS
K												
L	REPORTED TO SPILL I	LINE BY	POSITION		EMPLOYER LOC			OCATION CALLING FROM			TELEPHONE	
М	ANY ALTERNATE CON	ITACT	POSITION		EMI	PLOYER	ALTERNATE CONTACT LOCATION			ON	ALTERNATE TELEPHONE	
REPOR	LINE USE ONLY											
N	RECEIVED AT SPILL LI	NE BY	POSITION Station operato	r				LOCATION CALLED Yellowknife, NT			REPORT LINE NUMBER (867) 920-8130	
LEAD AGENCY EC CCG GNWT GN ILA INAC NEE			в 🗖 тс	C SIGNIFICANCE MINOR MAJOR UN		UNKNO	WN F	LE STA	ATUS OPEN CLOSED			
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LEAD AGENCY												
FIRSTS	UPPORT AGENCY											
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FIGURE 2: Instructions for Completing the NT-NU Spill Report Form

Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. Spills can still be phoned in by calling collect at 867-920-8130.

A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. Please do not fill in the Report Number : the spill line will assign a number after the spill is reported.
B. Occurrence Date/Time	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).
C. Land Use Permit Number /Water Licence Number	This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.
D. Geographic Place Name	In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. You must include the geographic coordinates (Refer to Section E).
E. Geographic Coordinates	This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude.
F. Responsible Party Or Vessel Name	This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and e-mail. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.
G. Contractor involved?	Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill.
H. Product Spilled	Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B)
I. Spill Source	Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 m^2)
J. Factors Affecting Spill	Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or environment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space.
K. Additional Information	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".
L. Reported to Spill Line by	Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space.
M. Alternate Contact	Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill.
N. Report Line Use Only	Leave Blank. This box is for the Spill Line's use only.



PRODUCT CATEGORIES

The materials in this Spill Contingency Plan are generally divided into five categories:

Flammable Immiscible Liquids Soluble Solids/Oxidisers Flammable Compressed Gases Soluble Liquids Toxic Solids

Flammable Immiscible Liquids

These substances are all hydrocarbon-based and will ignite under certain conditions.

Petrol (gasoline) and aviation fuels pose the greatest fire and safety hazard and are not recoverable when spilled on water.

Action Plan Steps

Confirm that a spill has occurred. It may not be obvious if a spill has occurred - look for:

pooled liquid.

damage to equipment/tanks.

smell of fuel or chemicals and

leaks from hatches, valves or other fixtures

Assess the Situation

Before initiating response actions, take the time to determine the nature of a spill and to collect some or all of following facts:

potential risk of fire, explosion and environmental damage. extent of injuries to co-workers or the public. source and approximate size of the spill. possible methods to stop the flow of product; and proximity to water.

Take Action

Eliminate ignition source(s) if safe to do so.

Shut off spill source if safe to do so.

Attend to any injured persons.

Restrict personnel to the spill site using barriers or marker tape.

Warn others in the area of the spill.

Use an explosion meter to monitor atmospheric gas concentrations.

Report spill to Peregrine management.

Transport Spill Kit to the spill site.

Control spreading and minimise impacts.



Spill Containment and Recovery

Special care should be taken to ensure that spilled material does not reach waterbodies where recovery is more difficult. Ice augers (under appropriate conditions) can be effective in terms of locating and exposing oil for burning or pumping off.

Waste Disposal

At the Chidliak camps², all combustibles will be incinerated on a daily basis. This includes food scraps, office garbage, etc.

Non-hazardous solid "inert" waste generated (*i.e.*, scrap metal, pipe, wood, plastics, liners, Styrofoam) will be transported off site for disposal according to its nature.

All hazardous wastes and waste items that cannot be incinerated (including items which might be present at a remote fuel cache) are securely packaged, flown out on aircraft backhauls, and disposed of in designated locations off-site.

Prior to disposal, the hazardous waste will be properly packaged, labelled, and stored and manifested in a Transportation of Dangerous Goods (TDG) approved shipping container. (Peregrine's government-issued waste generator number for Nunavut projects will be written on manifests accompanying outbound waste shipments²).

The container will have the appropriate hazardous waste labels.

All Federal and Territorial regulations will be adhered to.

Used Container Disposal

To ensure the proper disposal of used containers that have contacted, collected or contained a hazardous or regulated substance (e,q), paint cans, oil cans, acid containers, aerosol cans).

Containers having contacted, collected or contained an acute hazardous material, corrosive or reactive substance will be triple washed with water prior to disposal. (Contaminated wash-water can report to labelled refuge drums).

Metal containers can be disposed of as scrap metal and flown off-site for disposal. Any free liquid in the container will be disposed of properly, and the residual material allowed to dry or solidify.

Used Drum Disposal

The majority of used fuel drums (205L) for Jet-B fuel, diesel² and unleaded petrol are returned to the supplier for refund or crushed⁵. However, during operations, some drums will be set aside for usage as refuge drums, for storage of other "used" products (*i.e.*, used glycol, used oil, spilt materials, oil filters, *etc*). These drums will be properly labelled and stored prior to acceptable removal and disposal, usually off-site at an approved facility.



RESPONSE ORGANISATION

On rare occasions, additional company and outside resources may need to be brought in to support the spill cleanup. For a major incident, the Project Manager (*cf. Page 3*) in co-operation with² the Project Manager – Operations³ or the specific Project Manager, if not Chidliak⁵, would mobilise Peregrine, contractor and outside expertise for the response.

GENERAL RESPONSIBILITIES

The following provides a general guide to the Spill Response Organisation responsibilities. In some cases, certain Peregrine personnel may fill dual roles, depending upon the circumstances of the incident.

In most incidents, the Site Supervisor, working with the site Spill Response Team, will handle the initial response, containment and cleanup. In larger incidents, Peregrine management will play a more active role. In all cases, Peregrine management will be notified immediately of a spill and will be responsible for notifying the 24-hour Spill Line or assigning this task to a designate.

Other contractors and specialists may be brought in to assist in response to a major incident.

Individual Discovering Incident

- Assess the initial severity of the spill and safety concerns.
- Identify the source of the spill
- Report all spills to Supervisor.
- Determine the size of the spill and stop or contain it, if possible.

Spill Response Team

- Conduct the cleanup of spills under the direction of the Supervisor.
- Deploy booms, absorbents and other equipment and materials as required.
- Take appropriate response measures.
- Continue the cleanup as directed by the Supervisor or until relieved.

Supervisor

Assist in initial and ongoing response efforts.



- Supervise the Spill Response Team.
- With work crew, take initial action to seal off the source and contain spill.
- Decide with Peregrine management if mobilisation of additional equipment is required.
- Assess whether burning is a viable cleanup measure. Consult Peregrine's emergency spill-response contractor or environmental consultant in completing this assessment.⁷
- Ensure co-ordination of equipment and manpower as needed (Peregrine and contractors)
- Ensure expeditious response and cleanup of the spill site and impacted area.

Additional Resources – Support Team to the Spill-Response Team

- Provide assistance to Supervisor as required.
- Responsible for mobilising additional Peregrine support staff, security and other contractors as required.

Peregrine Management

- Records the time of the report, source of information and details on location, size, type of spill and any other information available on the Spill Report Form.
- Ensures that the spill is reported to the Nunavut 24-Hour Spill Report Line.
- Oversees or directs the cleanup operation until it is satisfactorily completed.
- Together with the Supervisor, decides if additional equipment is required to contain and cleanup spills.
- Maintains contact with Supervisor to ensure final inspection and sign-off on the spill.
- Notifies internal company departments.
- Initiates Mutual Aid Agreements if so required.
- Oversees completion and distribution of the Spill Report.



- Ensures investigation identifies measures to prevent similar spills.
- Provides cleanup advice to the Supervisor.
- Assists with preparation of press releases.
- Provides advice on storage and disposal options.
- Ensures that there are followup reports prepared on the spill event, cleanup and environmental impacts.
- Takes action, as necessary, to prevent a recurrence.
- Liaises with government agencies (as required)

Response Resources

A wide variety of spill control/recovery equipment and material exists for dealing with spills of petroleum products and chemical reagents (cf. Page 4).

Response Equipment Deployment

All equipment is stored in such a manner as to be readily available on short notice.

The Supervisor would immediately respond to a reported spill site by notifying site personnel to move into place material necessary to provide control and cleanup (e.g., shovels, refuge drums, tarps, etc.). Emergency spill containment and recovery materials and supplies will be available on site for immediate mobilisation at any time. (In the case of the Qilaq Project² or activity on IOLs, or the Cumberland sampling project⁵ where there is no associated camp, a fully-equipped spill kit will be positioned at an easily-accessible central point or fuel cache within the programme area ²).



CONTACT LIST - SPILL RESPONSE/ASSISTANCE

Mobile Emergency Spill Response - Nunatta Environmental Services Inc., Igaluit

(NTI-registered company) nunatta@northwestel.net

Axel Have (867) 979-1488 (during

business, after hours)

Jim Wilson (same)

Qikiqtaaluk Corporation Expediting/Logistics

qc@nunavut.com

 $(867) 222-1020^3$

(867) 979-8433 (FAX)

Discovery Mining Services³

logistics@pdiam.com

(867) 445-1644 (24 hours) 3

(867) 222-3630 (Igaluit mobile)

Environment Canada

24-hour line

(867) 766-3737

Manager, Field Operations ⁴, Indian and Northern Affairs Canada

Nunavut (Igaluit Office)

(867) 975-4295⁴

Peter Kusugak

(867) 975-6445 (FAX)

Water Res. Officer

(867) 975-4298

Indian and Northern

Affairs (Igaluit)

RCMP, Igaluit detachment

Emergencies only:

(867) 979-1111

RCMP, Pangnirtung

Emergencies only: (867) 473-4111

detachment

Igaluit

Fire Department

(867) 979-4422 (emergency)

24-hour spill line: (867) 920-8130²

spills@gov.nt.ca²

Qikiqtani Inuit Association

Igaluit Office

(867) 979-5391

Environ. Conserv. Officer

GN-DOE- Igaluit Office

(867) 975-7700

Workers' Compensation Board –Occupational Health and Safety (Igaluit Office)

(877) 404-4407

Workers' Compensation Board-Exploration Site Accident Reports

(800) 661-0792 (24hr)



SPILL RESPONSE ACTIONS: BY PRODUCT

At the Peregrine projects under this Plan², "safety first" is the abiding principle which will guide response: Spills and products are to be handled as/if safety permits.

After adequate safety precautions, effort will be concentrated on stopping or eliminating the source of ignition.

Diesel

TYPICAL PHYSICAL AN	TYPICAL PHYSICAL AND CHEMICAL PROPERTIES						
ODOUR: Petrole SOLUBILITY: Insolu							
SAFETY MEASURES							
WARNING	Vapours are heavier than air and form easily at high temperatures. Empty containers can contain explosive vapours. Toxic gases form upon combustion. Eye contact causes irritation. Material can accumulate static charges. Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.						
PERSONAL PROTECTION	Always wear impervious, chemica1-resistant clothing, gloves, footwear, and goggles; nitrile and PVC are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE.) Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.						
PRECAUTIONS	Monitor for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone and peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.						



RESPONSE TO FIRES	
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, and alcohol foam or water fog. Use water to cool containers exposed to fire.

Hydraulic Oil

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES					
APPEARANCE: Straw-Yellow Liquid FLASH POINT: 215°C (Minimum) ODOUR: Petroleum POUR POINT: -25°C SOLUBILITY: Generally Insoluble VISCOSITY: Medium (265 x ST, 15°C) VAPOUR DENSITY: Few Vapours Emitted SPECIFIC GRAVITY: Floats on Water (0.9)					
SAFETY MEASURES					
Warning	Vapours are heavier than air but are unlikely to form. Toxic gas can form in fire and at high temperatures. CO, CO ₂ , and dense smoke are produced upon combustion. Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs.				
PERSONAL PROTECTION	Always wear impervious, chemical -resistant clothing, gloves, footwear, and goggles; PVC, nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER). Use of organic vapour cartridge respirator is highly unlikely.				
PRECAUTIONS	Avoid excessive heat, which can cause formation of vapours. Avoid contact with strong oxidisers, such as nitric acid, sulphuric acid, chlorine, ozone, and peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.				



RESPONSE TO FIRES				
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, alcohol, foam or water fog. NOTE: water or foam may cause frothing. Use water to cool containers exposed to fire.			

Lubricating Oil

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES					
APPEARANCE: Amber Liquid FLASH POINT: 190° to 2220°C ODOUR: Petroleum POUR POINT: -35° to -40°C SOLUBILITY: Generally Insoluble VISCOSITY: Medium (255 xST, 15°C) VAPOUR DENSITY: Few Vapours Emitted SPECIFIC GRAVITY: Floats on Water (0.9)					
SAFETY MEASURES					
WARNING	Vapours are heavier than air but are unlikely to form. Toxic gas can form in fire and at high temperatures. CO, CO ₂ , and dense smoke are produced upon combustion. Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs.				
PERSONAL PROTECTION	Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER). Use of organic vapour cartridge respirator is highly unlikely.				
PRECAUTIONS					



RESPONSE TO FIRES					
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA and eye protection when responding to lube oil fires. Shut off fuel supply.				
OAI ETTT ERWITS:	Extinguish fire with CO ₂ , dry chemical, alcohol foam or water fog. NOTE:				
	water or foam may cause frothing.				
	Use water to cool containers, exposed to fire.				
On Land	Prevent additional discharge of oil.				
	Do not flush into ditch/drainage systems.				
	Block entry into waterways.				
	Contain spill by diking with earth, snow or other barrier.				
	Remove minor spills with absorbent and/or peat moss.				
	Remove large spills with pumps or vacuum equipment.				
	Spill can also be mechanically removed if oil is too viscous to be pumped.				
On Water	Use booms to contain and concentrate spill.				
	Remove spill using absorbents or skimmer.				
	Protection booming can be considered for water intakes.				
STORAGE &	Store closed, labelled containers in cool, and ventilated areas away from				
TRANSFER	incompatible materials.				
DISPOSAL	Segregate waste types.				
	Place contaminated materials into marked containers.				
	Consult with environmental authorities during fina1 disposal.				
FIRST AID	-				
EYES	Flush eyes immediately with fresh, warm water (NOT HOT) water for 20				
2123	minutes, while holding the eyelids open.				
	Remove contact lenses, if exposed to vapours or liquid.				
	Get prompt medical attention.				
SKIN	Remove and launder contaminated clothing.				
	Wash skin thoroughly with soap and water.				
	Get medical attention.				
	Discard saturated leather articles.				
INHALATION	Move victim to fresh air.				
	Perform CPR if victim not breathing.				
	Provide oxygen if victim is having difficulty breathing.				
	Get prompt medical attention.				
	DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to				
INGESTION	drink. If vomiting begins, keep victim's head below hips to prevent				
	aspiration.				
	Get prompt medical attention.				
Wasto Oil					

Waste Oil



On Land	Prevent additional discharge of oil.		
	Do not flush into ditch/drainage systems.		
	Block entry into waterways.		
	Contain spill by diking with earth, snow or other barrier.		
	Remove minor spills with absorbent pads and/or peat moss.		
	Remove large spills with pumps or vacuum equipment.		
	Spill can also be mechanically removed if oil is too viscous to be		
	pumped.		
On Water	Use booms to contain and concentrate spill.		
	Remove spill using absorbents or skimmer.		
	Protection booming can be considered for water intakes.		
STORAGE &	Store closed, labelled containers in cool, ventilated areas away		
TRANSFER	from incompatible materials.		
DISPOSAL	Segregate waste types.		
	Place contaminated materials into marked containers.		
	Consult with environmental authorities during fina1 disposal.		
FIRST AID			
EYES	Flush eyes immediately with fresh, warm water (NOT HOT		
	WATER) for 20 minutes, while holding the eyelids open.		
	Remove contact lenses, if exposed to vapours or liquid.		
	Get prompt medical attention.		
SKIN	Remove and launder contaminated clothing.		
	Wash skin thoroughly with soap and water.		
	Get medical attention.		
	Discard saturated leather articles.		
INHALATION	Move victim to fresh air.		
	Perform CPR if victim not breathing.		
	Provide oxygen if victim is having difficulty breathing.		
	Get prompt medical attention.		
	DO NOT INDUCE VOMITING; if victim is conscious; give milk or		
INGESTION	water to drink. If vomiting begins, keep victim's head below hips		
	to prevent aspiration.		
	Get prompt medical attention.		



Petrol (Unleaded Gasoline)

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES
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APPEARANCE: Colourless Liquid

(Can Be Dyed) FLASH POINT: -50°C

Gasoline/Petroleum POUR POINT: -60°C ODOUR:

SOLUBILITY: Insoluble VISCOSITY: Not Viscous (<1 cSt)

Will Sink to Ground Level SPECIFIC GRAVITY: VAPOUR DENSITY: Floats on

Water (0.7 - 0.8)

vvater (0.7 - 0.8)	
SAFETY MEASURES	
WARNING	Vapours form instantaneously, and are heavier than air. Empty containers can contain explosive vapours. Vapours can travel to distant sources of ignition and flash back. Eye contact causes irritation. Material can accumulate static charges. Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.
PERSONAL PROTECTION	Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton and PVC are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE). Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant.
PRECAUTIONS	Monitor for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.
RESPONSE TO FIRES	
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, alcohol foam or water fog.

Use water to cool containers, exposed to fire.



On Land	ELIMINATE IGNITION SOURCES. Do not flush into ditch/drainage systems. Block entry into waterways. Contain spill by diking with earth, snow or other barrier. Remove minor spills with peat moss and/or absorbent pads. Cover pools with foam to prevent vapour evolution if gasoline presents a fire hazard; otherwise allow vapours to dissipate.		
On Water	ELIMINATE IGNITION SOURCES. DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS. Protection booming can be considered for water intakes.		
STORAGE & TRANSFER	Store closed, labelled container in cool, ventilated areas away from incompatible materials. Electrically ground containers and vehicles during transfer.		
DISPOSAL	Place contaminated materials into segregated marked containers. Consult with environmental authorities during final disposal.		
FIRST AID			
EYES	Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.		
SKIN	Remove and launder contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention. Discard saturated leather articles.		
INHALATION	Move victim to fresh air. Perform CPR if victim not breathing. Provide oxygen if victim is having difficulty breathing. Get prompt medical attention.		
INGESTION	DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration. Get prompt medical attention.		



Jet-B (JP-4) OR Jet-A Fuel

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White or Pale Yellow Liquid FLASH POINT: -20°C to -25°C

ODOUR: Gasoline/Petroleum POUR POINT: -50°C

SOLUBILITY: Negligible VISCOSITY: Not Viscous (<7 cSt)

VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Floats on

Water (0.75 - 0.8)

SAFETY MEASURES				
WARNING	Vapours instantaneously form, and are heavier than air. Low-lying areas can trap explosive vapours.			
VVARMINO	Vapours can travel to distant sources of ignition and flash back.			
	Eye contact causes irritation.			
	Material can accumulate static charges.			
	Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.			
PERSONAL PROTECTION	Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton and PVC are suitable materials (DO NOT USE NATURAL RUBBER or			
	NEOPRENE). Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant.			
PRECAUTIONS	Monitor for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources.			
	Restrict access and work upwind of spill.			
RESPONSE TO FIRES				
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, alcohol foam or water fog. Use water to cool containers, exposed to fire.			



	ELIMINATE IGNITION SOURCES.		
ON LAND			
ON LAND	Do not flush into ditch/drainage systems. Block entry into waterways.		
	Contain spill by diking with earth, snow or other barrier.		
	Remove minor spills with peat moss and/or absorbent pads.		
	Cover pools with foam to prevent vapour evolution if gasoline		
	presents a fire hazard; otherwise allow vapours to dissipate.		
	ELIMINATE IGNITION SOURCES.		
On Water	DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.		
	Protection booming can be considered for water intakes.		
	Store closed, labelled containers in cool, ventilated areas away		
STORAGE &	from incompatible materials.		
TRANSFER	Electrically ground containers and vehicles during transfer.		
DISPOSAL	Place contaminated materials into segregated marked containers.		
	Consult with environmental authorities during final disposal.		
FIRST AID			
	Flush eyes immediately with fresh, warm water (NOT HOT		
EYES	WATER) for 20 minutes, while holding the eyelids open.		
	Remove contact lenses, if exposed to vapours or liquid.		
	Get prompt medical attention.		
SKIN	Remove and launder contaminated clothing.		
	Wash skin thoroughly with soap and water.		
	Get medical attention.		
	Discard saturated leather articles.		
INHALATION	Move victim to fresh air.		
	Perform CPR if victim not breathing.		
	Provide oxygen if victim is having difficulty breathing.		
	Get prompt medical attention.		
INGESTION	DO NOT INDUCE VOMITING; if victim is conscious; give milk or		
	water to drink. If vomiting begins, keep victim's head below hips		
	to prevent aspiration.		
	Get prompt medical attention.		



Fuel Dye

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Dark Red Liquid FLASH POINT: -28°C

ODOUR: Aromatic Hydrocarbon POUR POINT: -45°C

SOLUBILITY: Negligible VISCOSITY: Not Viscous

VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Floats on

Water

SAFETY MEASURES			
WARNING	Vapours instantaneously form, and are heavier than air. Low-lying areas can trap explosive vapours. Vapours can travel to distant sources of ignition and flash back. Eye contact causes irritation. Material contains xylene, benzene and ethyl benzene.		
PERSONAL PROTECTION	Inhalation of vapours can cause nausea, headache and dizziness. Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE OR PVC). Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant.		
PRECAUTIONS	Avoid breathing vapours or mist. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.		
RESPONSE TO FIRES			
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, AFFF foam or water fog. Use water to cool containers, exposed to fire.		



Propane

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TYPICAL	PHYSICAL	AND	CHEMICAL	PROPERTIES

APPEARANCE: Colourless Gas FLASH POINT: -104°C ODOUR: Natural Gas Odour POUR POINT: -190°C

SOLUBILITY: Insoluble VISCOSITY: N/A

VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Liquid Floats

on Water

SAFETY MEASURES			
WARNING	Vapours form instantaneously, and are heavier than air. Vapours can travel to distant sources of ignition and flash back. Eye contact causes irritation. Material can accumulate static charges. Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.		
PERSONAL PROTECTION	Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; Nitrile: and Viton are suitable protective materials (DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC). Avoid frostbite bum to skin and eyes from contact with propane. Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.		
PRECAUTIONS	Monitor for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.		
RESPONSE TO FIRES			
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, alcohol foam or water fog. Use water to cool containers, exposed to fire.		



On Land	ELIMINATE IGNITION SOURCES. DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.	
On Water	ELIMINATE IGNITION SOURCES. DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.	
STORAGE & TRANSFER	It is not possible to collect released material.	
DISPOSAL	Consult with environmental authorities if the disposal of any contaminated materials is required.	
FIRST AID		
EYES	Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.	
SKIN	Remove and launder contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention. Discard saturated leather articles.	
Inhalation	Move victim to fresh air. Perform CPR if victim not breathing. Provide oxygen if victim is having difficulty breathing. Get prompt medical attention.	
Ingestion	DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration. Get prompt medical attention.	



Acetylene

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES				
ODOUR: Garlic-SOLUBILITY: Slightl	rless Gas FLASH POINT: -18°C -Like POUR POINT: -82°C y Soluble VISCOSITY: N/A Will Sink to Ground Level SPECIFIC GRAVITY: Liquid Floats			
SAFETY MEASURES				
WARNING	Warning Vapours form instantaneously, and are heavier than air. Empty containers can contain explosive vapours. Vapours can travel to distant sources of ignition and flash back. Eye contact causes irritation. Material can accumulate static charges. Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness.			
PERSONAL PROTECTION	Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; use suitable protective materials (DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC). Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA.			
PRECAUTIONS	Monitor for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, and peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.			
RESPONSE TO FIRES				
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, alcohol, foam, or water fog. Use water to cool containers, exposed to fire.			



Antifreeze (Ethylene Glycol)

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colourless Liquid FLASH POINT: 111°C

ODOUR: Slight; Undetectable <25 ppm POUR POINT: -13°C (48% Solution)

SOLUBILITY: Soluble in All Proportions VISCOSITY: Not Viscous (=22 cSt) VAPOUR DENSITY: Will Sinks to Ground Level Specific Gravity: Same as

Water (1.0)

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SAFETY MEASURES	
WARNING	Vapours are heavier than air. Ingestion of significant quantities can be lethal. Eye contact causes irritation. Skin contact can cause intoxication due to absorption. Inhalation of vapours can cause intoxication, headache, vomiting, unconsciousness with convu1sions, and even death Avoid inhaling vapours, particularly in enclosed places.
PERSONAL PROTECTION	Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; neoprenes, nitrile, PVC are suitable protective materials.
PRECAUTIONS	Monitor empty containers for explosive atmosphere. Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources. Restrict access and work upwind of spill.
RESPONSE TO FIRES	
CONSIDER ACTION ONLY IF SAFETY PERMITS!	Wear SCBA in confined areas. Shut off fuel supply. Extinguish fire with CO ₂ , dry chemical, alcohol foam or water fog. (Note: Water or foam may cause frothing). Use water spray to cool containers exposed to fire.



On Land	Block entry into waterways. Do not flush into ditch/drainage systems. Contain spill by diking with earth, snow or other barrier. Remove minor spills with universal type absorbent. Remove large spills with pumps or vacuum equipment.
On Water	Ethylene glycol sinks and mixes with water; contain spill by isolating contaminated water through damming or diversion.
STORAGE & TRANSFER	Store closed, labelled containers in cool, ventilated areas away from incompatible materials
DISPOSAL	Segregate waste types. Place contaminated materials into marked containers. Consult with environmental authorities during final disposal.
FIRST AID	
EYES	Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open. Remove contact lenses, if exposed to vapours or liquid. Get prompt medical attention.
SKIN	Remove contaminated clothing. Wash skin thoroughly soap and water. Get medical attention.
INHALATION	Move victim to fresh air. Perform CPR if victim not breathing Provide oxygen if victim is having difficulty breathing. Get prompt medical attention.
INGESTION	INDUCE VOMITING IMMEDIATELY if victim is conscious; Get prompt medical attention.



SPILL PLANNING AND LOGISTICS

The feasibility of containing and recovering a spill will be generally determined by its location and the rate of release, spreading, transport and evaporation. These rates should be compared with the total time needed to deploy response equipment in order to evaluate whether or not containment, and/or absorbent and skimming operations can be effectively implemented. The pre-assembly of spill cleanup kits will expedite response and reduce the total deployment time needed, including:

Equipment and support material mobilisation time. Personnel mobilisation time, including transit and assembly. Actual equipment setup and deployment time.

- a. Determine Whether or not a spill has entered a waterway and whether or not access by land or water to control points is possible so that booms, absorbents and skimmers can be deployed. Check maps and consult with personnel familiar with the spill area.
- b. Establish priorities to optimise use of personnel and gear needed for all cleanup phases (containment, removal, storage, transfer and disposal) at selected sites.
- c. Allow additional time for adverse weather and flying.

MONITORING SPILLS

Peregrine will monitor spills throughout the response to ensure safety and to direct cleanup efforts:

Explosive gas concentrations in the atmosphere using an explosion meter.

Spill movement and behaviour, in order to properly direct response efforts.

All threats to the safety of people, property and the environment.

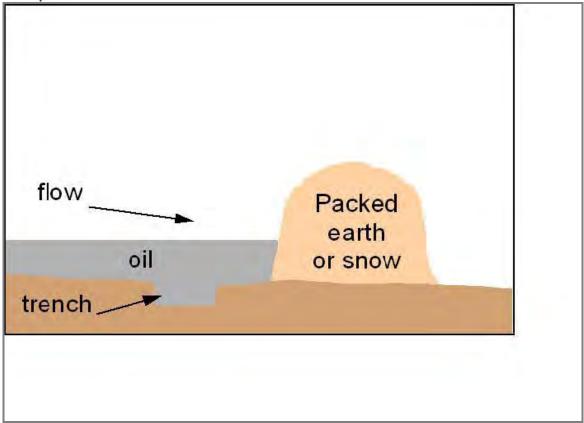
SPILLS ON LAND

Spills on land should be contained as close to the source as possible, if safety allows. Peregrine will make every effort to ensure that a spill does not reach water, where its containment and recovery (after breakup) are more difficult and the potential environmental impacts are greater. Containment can be achieved using:

A berm or dyke around the spill source.

A trench or ditch downslope of the spill source.





Earthen Berm/Trench

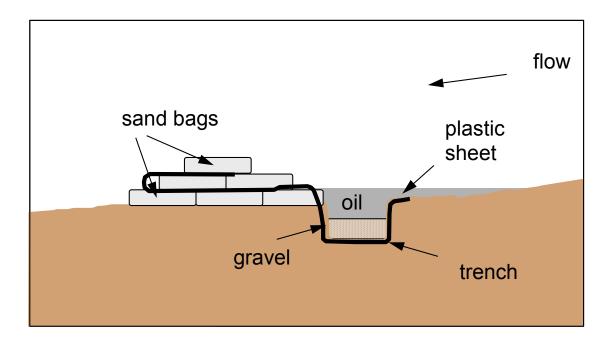
If possible, locate the berm/trench sufficiently downslope of the release point to complete its construction before the spill arrives. Dig the trench along a natural drainage contour.

It should be approximately 0.5 m deep with a relatively flat bottom. The excavated material can then be combined with other available material to build the berm.

Sand Bag Berm/Trench

Sand bags can be used where available and if the earth is too hard or frozen and cannot be excavated or compacted. A plastic liner can be used to seal the trench and bags should be anchored with gravel or rocks and be woven between layers of bags.





Spills on Muskeg

Muskeg is generally poorly drained, wet and spongy. Internal drainage is usually slow and the depth of peat over mineral soil varies greatly. Muskeg is also highly acidic and low in nutrients, making biodegradation very slow, even during the summer months.

It is recommended that small oil spills in muskeg be mixed with peat moss and allowed to degrade during the summer months, since more damage can be done by attempting cleanup using mechanical removal methods.

In the event of a small spill, it is important to weigh the advantages or cleanup versus the potential negative impacts on the terrain. Both personnel and equipment on wet or sensitive areas can cause considerable damage. In many cases, the best solution may be to add nutrients to the contaminated area and monitor the site to ensure that the spill does not migrate to an adjacent sensitive area. In all cases, appropriate environmental advisors and regulatory authorities should be consulted.



SPILLS ON WATER

Containing spills in water is often difficult because oil quickly spreads. In turbulent water, oil and chemicals are likely to mix into the water column, making recovery impractical. For these reasons, it is important that if the spill reaches water, that containment be attempted as close to the source as possible, and that the spill be prevented from reaching a flowing stream.

Spills in lakes should be contained, if possible, before reaching outlets where containment and recovery can be difficult and dangerous.

Efforts to contain spills in large streams should be limited to land-based operations where the oil might pool in accessible back eddies. The recovery of water-soluble chemicals is not possible.

In flowing streams, oil travels at the same speed as the surface current. On larger rivers or in open lake areas, slicks are also transported at 3.5% of the wind speed. Although a comparatively small effect, it can be an important factor if the wind is at right angles to the water flow and if the water surface is extensive. The wind can force the spill to the sides of the river where flows are slower or the shore of a lake. Long reaches of the river may become contaminated, although containment and recovery might also be possible.

In smaller streams, the wind will have less impact and the slick speed can be easily estimated. Placing a small stick in the middle of the stream and determining the length of time required to travel a given distance, typically 10 m. This information can be quickly converted to speed (36/time (sec) = km/h) to determine the estimated travel time to a confluence or other sensitive area.

Containment Strategies for Spills on Water

Determining the best strategy for containment will depend on a number of factors:

Speed of oil-slick travel Location of possible containment sites Availability of personnel and equipment Location of sensitive areas Safety of operations

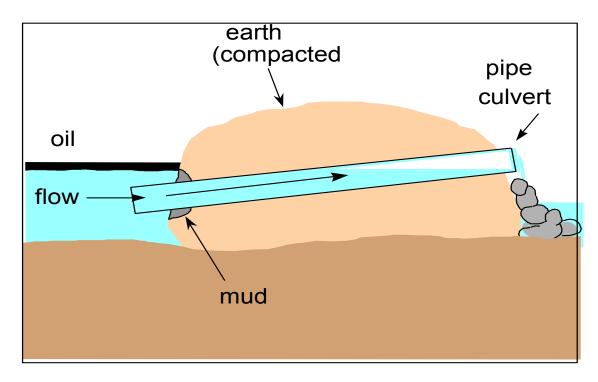
Spills on water can be contained by using floating booms (absorbent or non-absorbent) or by constructing a temporary berm or inverted weir. The objective is to build a barrier against which the (normally floating) oil will pool whilst allowing the underflow of water.



Inverted Weir:

Booms

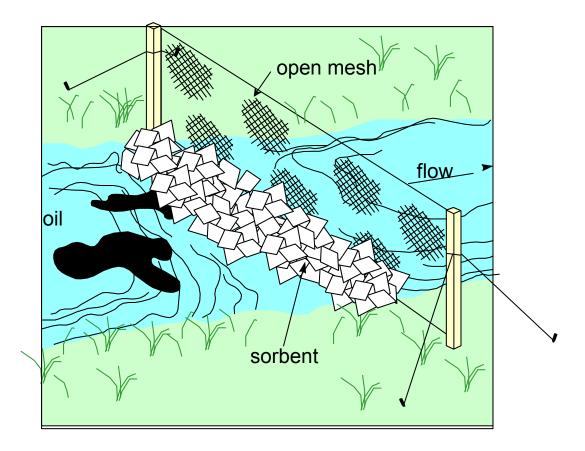
Booming with either absorbent or non-absorbent booms can also be an effective means of containing spills on slow-moving waters and in lakes. Effective containment using conventional booming techniques will be difficult in streams or rivers where currents exceed 0.7 knots (0.4m/s). At these speeds, oil will become entrained in the water flowing under the boom, resulting in significant Losses. Some improvements can be achieved in waters flowing at 1-2 knots (0.5-1 m/s) if the boom is deployed at an angle of less than 90 degrees to the direction of the flow.



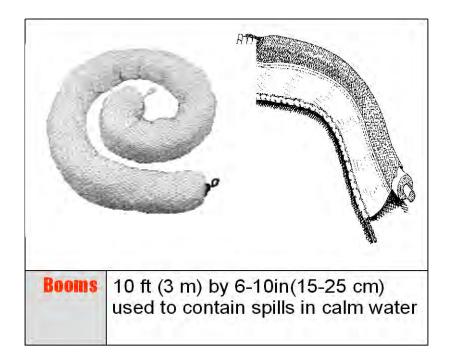
Absorbent booms or socks can also be used to provide a barrier to floating oil. These types of booms should be checked regularly to ensure that they do not become saturated with either water or oil, since they will tend to float very low in the water or even sink and release oil downstream.



Filter Fence:







SPILLS ON ICE AND SNOW

Oil can remain relatively fresh, i.e., in an unweathered state under snow and ice for several months or more after a spill.

Evaporation rates will still be high when oil is ultimately exposed to the atmosphere, except in very low temperatures. Oil can also move up and down small hills (several metres high) due to the capillary action of the snow.

Containment

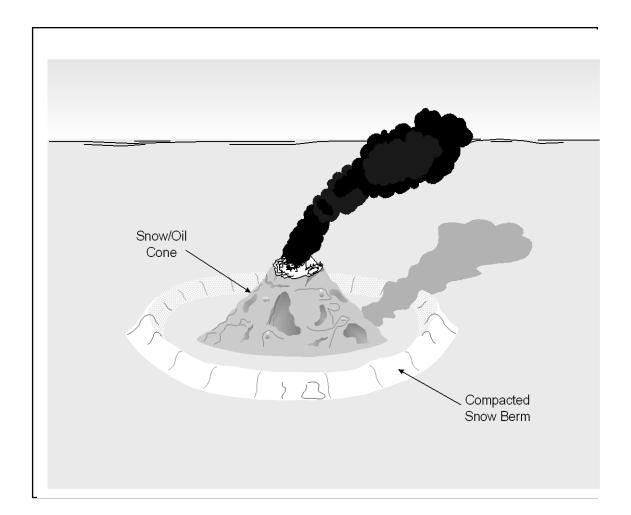
Snow and ice can be used to create berms to keep spills from spreading. In frozen rivers, angled slots about 1 m wide or holes can be cut in the ice, where safety permits, to allow possible spill recovery. The oil will rise up into the openings where it will concentrate and be available for recovery using skimmers or pumps.



Disposal

Oil spills in snow and ice can sometimes be burned if the spill can be isolated from the source. Although there is generally a reduced fire hazard, due attention to safety of operations is still required. If burning is not effective, recovered contaminated material will be collected and transported to a designated disposal/treatment facility.

Burning Snow Cone:





Recovery

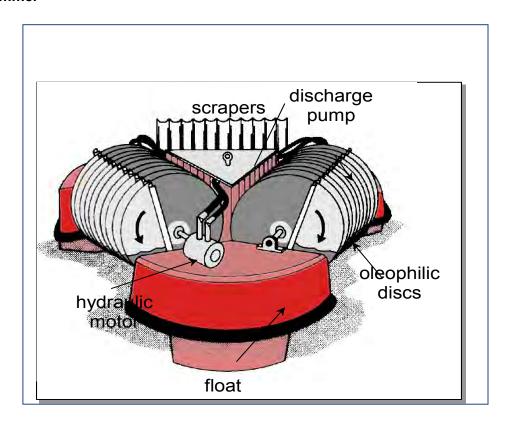
When large volumes of oil have been contained either through natural or mechanical containment, it will be necessary to remove or recover the accumulated oil. This will generally occur in excavated trenches or adjacent to berms or natural barriers and occasionally in slow running streams or quiet ponds.

Vacuum trucks are not feasible at fly-in sites, but would be suitable for sites served by a seasonal or winter road and where a large volume of oil has pooled that is generally free of water. The truck must be positioned at a safe distance so that there is no possibility of fire or explosion.

Oleophillic devices, such as disc or drum skimmers, can selectively recover oil in water, and are better suited to applications where the oil has formed a distinct layer on top of quiet water. Accumulations adjacent to an inverted weir are an example. A vacuum truck would be largely ineffective in this instance, since it would recover large amounts of water, particularly in a thin layer of oil with water flowing through the pipe or culvert.

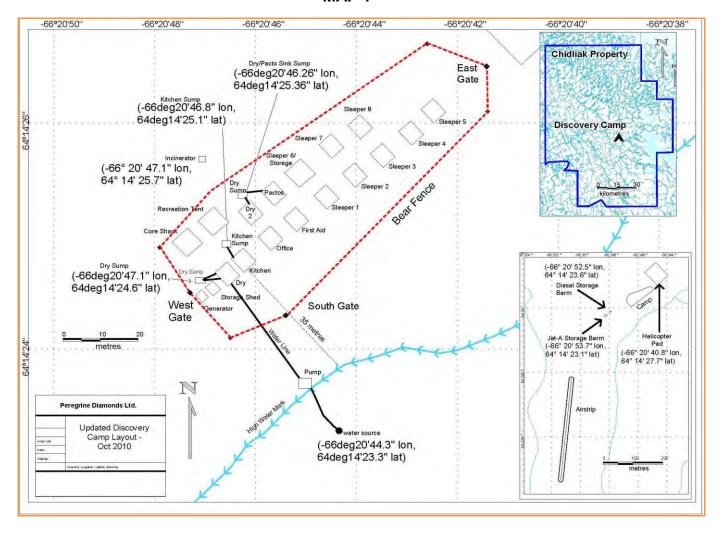
When using disc or drum skimmers, ensure that small items of debris are periodically removed from the scrapers to ensure their efficient operation.

Disc Skimmer





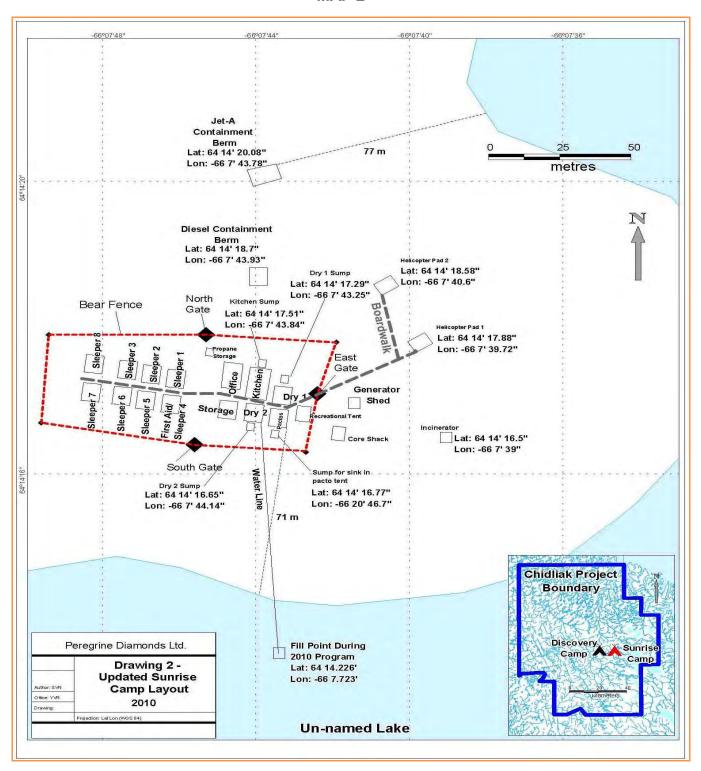
MAP 1⁶



Discovery (Summer-Use) Camp - Layout



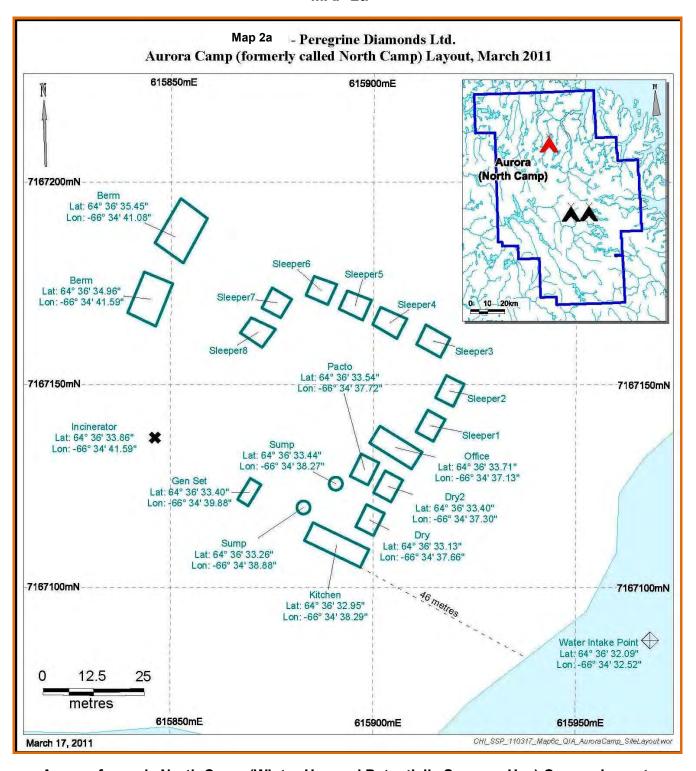
MAP 2⁶



Sunrise (Winter-Use and Summer-Use) Camp - Layout

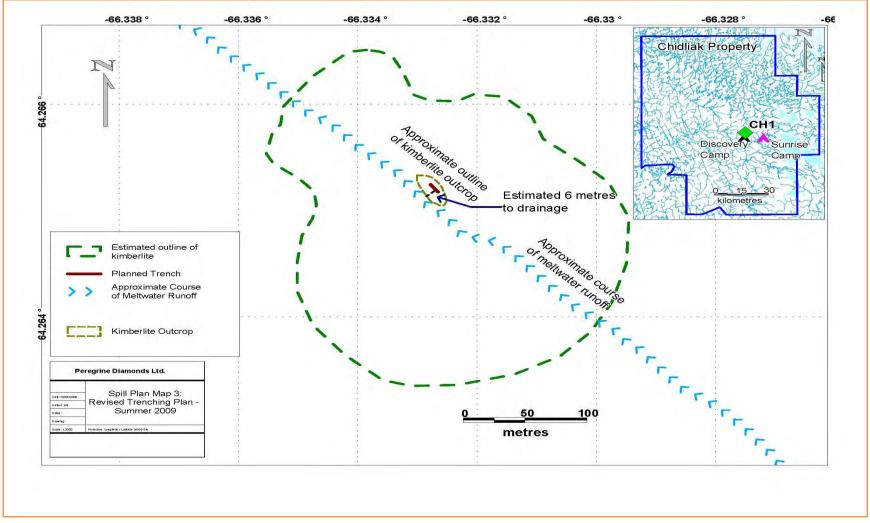


MAP 2a ⁷



Aurora, formerly North Camp (Winter-Use and Potentially Summer-Use) Camp – Layout

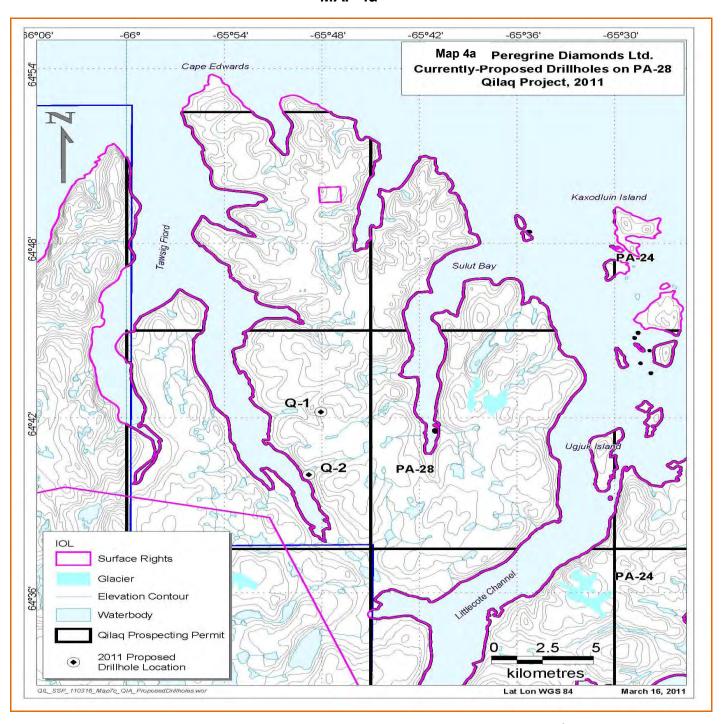




 $\,$ MAP 3 $\,$ Trenching plan was approved for CH-1 kimberlite but has not yet occurred as of 2011 6



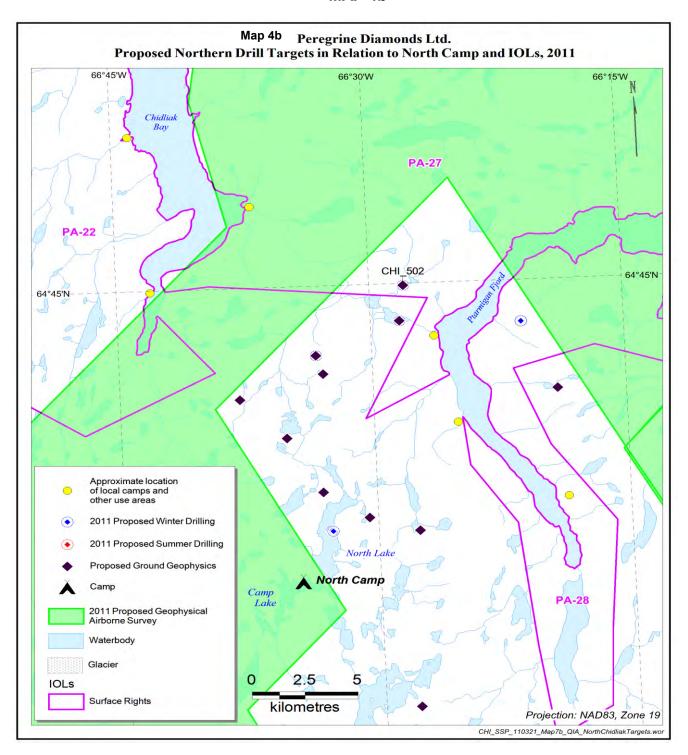
MAP $4a^7$



Proposed drillhole locations on IOL Parcel *PA-28 (not yet drilled in 2010.)*⁶ Up to 8 new targets will be selected for drilling on *PA-28* following completion of an airborne survey over *PA-28* in spring 2011.



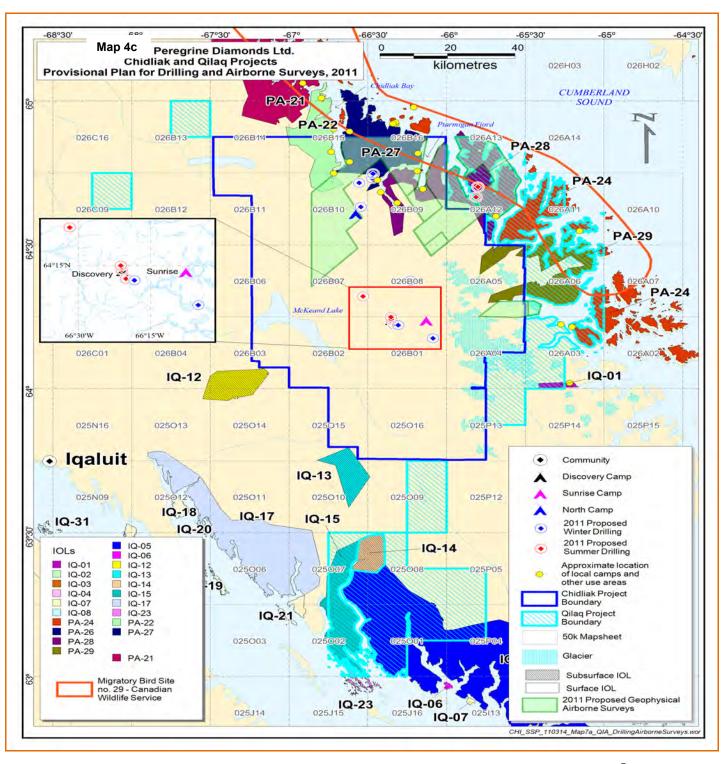
MAP 4b 7



Proposed Chidliak drillhole locations on IOL Parcels PA-28 (1 hole) and PA-28 (1 hole) are scheduled for drilling in spring 2011. 7



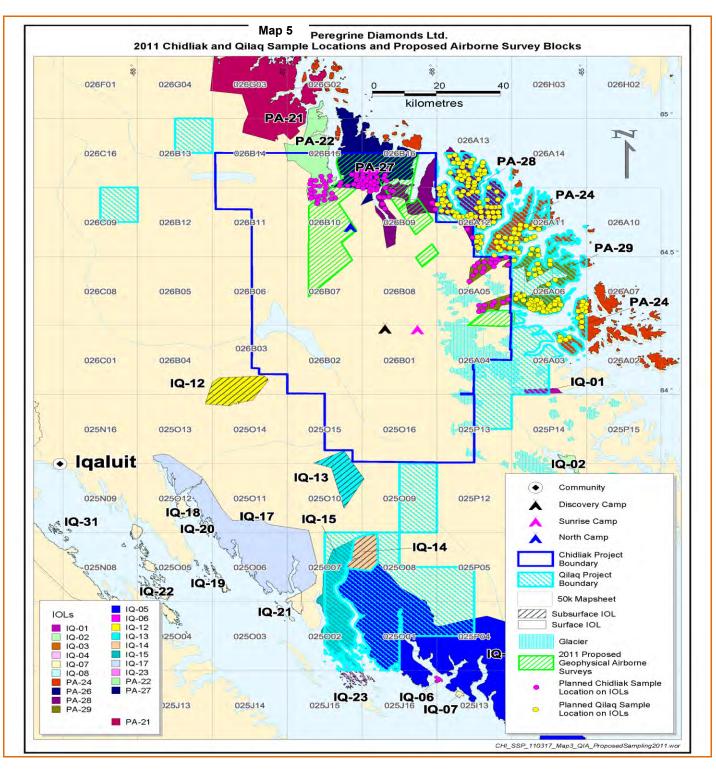
MAP 4c 7



All proposed drillhole locations on Peregrine properties, Hall Peninsula, 2011. 7



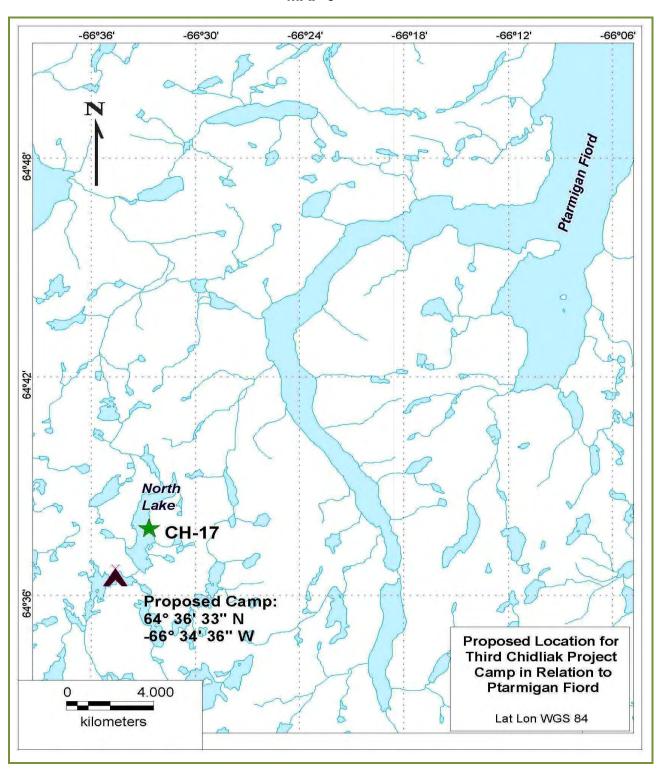
MAP 5⁷



Provisional Sample Plan for IOLs, Hall Peninsula, 2011 7



MAP 6⁵



Location of Third Camp, Chidliak Project, approx. 50km N of Existing Camps 6



APPENDIX TO SPILL CONTINGENCY PLAN – CHIDLIAK AND QILAQ PROPERTIES⁴ AND IOLs AND CUMBERLAND PROJECT⁵

MATERIAL SAFETY DATA SHEETS (MSDS)

(See MSDS on updated CD provided to regulators in June 2010)
Those products will remain in effect for 2011. ⁶
Two new MSDS Sheets are noted below in "Miscellaneous Chemicals"
Section and will be supplied to regulators ⁷



MATERIAL SAFETY DATA SHEETS

FUELS, FUEL ADDITIVES, OIL Chidliak and Qilaq⁴ Projects – 2010-2011⁵ Programmes (and activity on IOLs, as applicable)²

(See MSDS on CD provided in June 2010) [Items on updated MSDS List are noted below] 5

MSDS-Bombardier BRP XP-S Mineral 2-Stroke Injection Oil-413803000-Unregulated

MSDS-ChainOil-Light-Shell-2008-CURRENT

MSDS-Diesel Fuel Oil Conditioner-Kleen-Flo-2009-CURRENT

MSDS-DIESEL Fuel-PetroCan-2009-CURRENT

MSDS-Duron 10W-30 Heavy Duty EngineOil-PetroCan-2009-CURRENT

MSDS-Duron 15W-40 Heavy Duty EngineOil-PetroCan-2010-CURRENT

MSDS-HYDREX_MV 22_36_60-PetroCan-2009-CURRENT

MSDS-HYDREX_MV_Arctic_15-PetroCan-2008-CURRENT

MSDS-Jet A1-Shell-2008-CURRENT

MSDS-Jet A-A1-PetroCan-2009-CURRENT

MSDS-Jet B-PetroCan-2009-CURRENT

MSDS-Kleen Start-Starting Fluid-Kleen-Flo-2010-CURRENT

MSDS-Mobil Jet Oil 254-Esso-2008-CURRENT

MSDS-Mobil Jet Oil II-Esso-2007-CURRENT

MSDS-Petrol Unleaded-Shell-2010-CURRENT

MSDS-Petrol-Unleaded-PetroCan-2010-CURRENT

MSDS-Polaris 2T VES Synthetic Oil-2007-CURRENT

MSDS-Polaris Prem. Blue Semi-Synthetic Blend Oil-2007-CURRENT

MSDS-Propane-SuperiorPropane-2008-CURRENT

MSDS-Quaker State SAE 30 Motor Oil-2008-CURRENT

MSDS-Rotella T 10W-30-CJ-4-Engine Oil-Shell-2009-CURRENT

MSDS-Rotella T 15W-40-CJ-4-Engine Oil-Shell-2009-CURRENT

MSDS-Snowmobile Motor Oil-PetroCan-2009-CURRENT



DRILLING MUDS, GREASES, LUBRICANTS Chidliak and Qilaq⁴ Projects – 2010-2011⁵ Programmes (and activity on IOLs, as applicable)²

(See MSDS on CD provided in June 2010) [Items on updated MSDS List are noted below] ⁵

MSDS-Aeroshell Fluid 41-Aircraft-2009-CURRENT

MSDS-Aeroshell Grease 7-Aircraft-2008-CURRENT

MSDS-Aeroshell Grease 22-Aircraft-2008-CURRENT

MSDS-API ModifThreadCompound-PetroCan-2009-CURRENT

MSDS-DD2000-DrillingMud-2008-CURRENT

MSDS-Drill Rod Grease-PetroCan-2010-CURRENT

MSDS-Enviro Grease- Drill Rod Grease-Poly-Drill-2008-CURRENT

MSDS-Grease OG-0-1-2-PetroCan-2010-CURRENT

MSDS-Lithium Complex Moly 3 or 5-Grease Warehouse-2007-CURRENT

MSDS-LPS 1 Premium Lubricant-2008-CURRENT

MSDS-LPS 2 Aerosol-PetrolDistillate-2009-CURRENT

MSDS-PD1300-Poly-Drill-2008-CURRENT

MSDS-Pure Vis-Mineral Oil Viscosifier-Poly-Drill-2009-CURRENT

MSDS-Traxon-80W-90-85W-140-PetroCan-2009-CURRENT

MSDS-Traxon Synthetic 75W-90-PtroCan-2009-CURRENT

MSDS-WD40-Aerosol-2008-CURRENT

MSDS-WD40-BulkLiquid-2008-CURRENT



MISCELLANEOUS CHEMICALS Chidliak and Qilaq⁴ Projects – 2010-2011⁵ Programmes (and activity on IOLs, as applicable)²

(See MSDS on CD provided in June 2010) Two new MSDS Sheets are noted below in "Miscellaneous Chemicals" Section and will be supplied to regulators ⁷

MSDS-Back Off Bear Deterrent--2010-CURRENT

MSDS-Brake & Elec. Contact Kleen-2009-CURRENT

MSDS-Dow Corning 736 Heat-Resistant Sealant-2010-CURRENT

MSDS-Electro Contact Cleaner-LPS Labs-2008-CURRENT

MSDS-Fire Extinguisher ABC Multipurpose Dry Chemical-2009-CURRENT

MSDS-Gun Blue-Bushnell-Aug2007-CURRENT

MSDS-Kleen-Flo Silicone Gasket Maker-2009-CURRENT

MSDS-Lacguer Thinner 13-554-Recochem-2007-CURRENT

MSDS-LaFarge Portland Cement--2008-CURRENT

MSDS-Lead-Acid-BATTERY-Exide-2008-CURRENT

MSDS-LePage Prestite Contact Cement-2008-Unregulated

MSDS-LePage Speed-Set Epoxy Hardener-2008-CURRENT

MSDS-LePage Speed-Set Epoxy Resin-2008-CURRENT

MSDS-Liqui-Bac-RML Co-2005-Unregulated

MSDS-LPS A-151 Solvent Degreaser-incl. Aerosol-2010-CURRENT

MSDS-Marking SPRAY PAINT-RustOLeum-2008-CURRENT

MSDS-Methyl Ethyl Ketone Solvent-Scienlabs-2008-CURRENT

MSDS-Methyl Hydrate 13-390-Alcohol Solvent-Recochem-2009-CURRENT

MSDS-Motomaster Elec. Contact Cleaner-ShraderCanada-2008-CURRENT

MSDS-Nitrogen-Inert-Undated-CURRENT

MSDS-Oxygen (gas liquid)-Various Uses-Air Liquide-2008-CURRENT

MSDS-Oxygen Medical-Airgas Company-2007-CURRENT

MSDS-PRIST Aviation Glass Cleaner Aerosol-2010-CURRENT

MSDS-Snowmobile Antifreeze 50-50 PreMix PG-Polaris-2007-CURRENT

MSDS-Winter Universal Gas Line Antifreeze-PetroCan-2010-CURRENT

MSDS-Wurth Brake Cleaner 4L-2009-CURRENT

MSDS-Boss Lubricants Propylene Glycol Antifreeze-2009-CURRENT

MSDS-Univar Propylene Glycol USP/EP-2009-CURRENT⁷



APPENDIX TO SPILL CONTINGENCY PLAN – CHIDLIAK AND QILAQ PROPERTIES AND IOLS AND CUMBERLAND PROJECT⁶

"NOTICE OF MODIFICATION" LETTER TO NUNAVUT WATER BOARD REGARDING SINGLE EVENT OF BLASTING WHICH OCCURRED IN JULY 2010

In compliance with Water Licence #2BE-CHI0813 Amendment #3, Part H, Item 2(a), Peregrine commits to providing 30 days' notice to the Nunavut Water Board, should explosives use be contemplated in 2011. The appropriate mitigations for the specific explosives intended and for their specific use would then be supplied by Peregrine as advised by the explosives specialist supplying the product(s).